BRITISH JOURNAL

OF

HAEMATOLOGY

EDITORS: MIKE GREAVES, IAN HANN, DAVID OSCIER

ASSOCIATE EDITORS

B. Bennett, H. E. Broxmeyer, A. K. Burnett, F. Cotter, R. Foa, M. Y. Gordon,
G. D. O. Lowe, J. A. F. Napier, I. R. Peake, M. J. Pippard, J. T. Reilly, N. Russell, S. L. Thein

ANNOTATIONS EDITORS

D. Hoelzer, N. Russell, S. L. Thein

EDITORIAL BOARD

A. V. Hoffbrand *Chairman*
T. Baglin, B. J. Bain, Y. Beuzard, M. K. Brenner, E. Briet, C. Camaschella,
C. J. Eaves, P. Fenaux, A. R. Green, J. D. Griffin, H. Heslop, D. Hoelzer, J. H. Kersey,
M. Le Beau, B. Löwenberg, P. M. Mannucci, C. Mecucci, D. R. Miller,
G. Prentice, E. G. D. Tuddenham, T. Uchiyama, M. Worwood

Volume 107
Pages 1–910

b
Blackwell
Science

1999

© 1999 *British Journal of Haematology* Blackwell Science Ltd
Published by Blackwell Science Ltd
Osney Mead, Oxford OX2 0EL
25 John Street, London WC1N 2BL
23 Ainslie Place, Edinburgh EH3 6AJ
Commerce Place, 350 Main Street, Malden, Massachusetts 02148, U.S.A.

Other Editorial Offices:
Blackwell Wissenschafts-Verlag GmbH, Kurfürstendam 57, D-10707 Berlin, Germany
Blackwell Science, 224 Bd Saint-Germain, 75007 Paris, France
Blackwell Science Asia, 54 University Street, Carlton South 3053, Victoria, Australia
Blackwell Science KK, MG Kodenmacho Building, 7–10 Kodenmacho, Nihombashi, Chou-ku, Tokyo 104, Japan

Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by Blackwell Science Ltd for libraries and other users registered with the Copyright Clearance Centre (CCC) Transactional Reporting Service, provided that the base fee of $14.00 per copy is paid directly to CCC, 222 Rosewood Drive, Suite 910, Danvers, MA 01973, U.S.A. This consent does not extend to other kinds of copying such as copying for general distribution, for advertising or promotional purposes, for creating new collective works or for resale. Special requests should be addressed to the Editor, *British Journal of Haematology*, ISSN 0007-1048/99 $14.00.

British Journal of Haematology is covered by *ADONIS, ASCA, Chemical Abstracts, Current Awareness in Biological Sciences, Current Contents, Current Clinical Cancer, Index Medicus, ISI/BIOMED,* and *Science Citation Index*.

ISSN 0007-1048

Typeset and printed by the Alden Group, Oxford.

BRITISH JOURNAL OF HAEMATOLOGY

VOL. 107 NO. 1 OCTOBER 1999

Images in Haematology

1 **Hepatic haemopoiesis in β-thalassaemia trait**
S. K. Ma and W. Y. Au

Reviews

2 **Management of sickle cell disease: recent advances and controversies**
Oswaldo Castro

12 **Is it dominantly inherited β thalassaemia or just a β-chain variant that is highly unstable?**
Swee Lay Thein

Historical review

22 **Coagulation history, Oxford 1951–53**
Stuart Douglas

Haemopoiesis

RESEARCH PAPER

33 **Haemopoietic progenitor cell lines generated by the myeloproliferative leukaemia virus: a model system to analyse murine and human lineage-affiliated genes**
Andrew M. Thomson, Nigel A. Roberts, Jacqueline A. Sloane Stanley, Michèle Souyri and William G. Wood

Bone marrow failure

RESEARCH PAPER

49 **Pregnancy in bone marrow failure syndromes: Diamond-Blackfan anaemia and Shwachman-Diamond syndrome**
Blanche P. Alter, Manjusha Kumar, Lillian L. Lockhart, Philippa G. Sprinz and Thomas F. Rowe

Leucocytes

RESEARCH PAPER

55 **Long-term decrease of $CD4^+CD45RA^+$ T cells and impaired primary immune response after post-traumatic splenectomy**
Herman M. Wolf, Martha M. Eibl, Erich Georgi, Aysen Samstag, Martin Spatz, Selman Uranüs and Rainer Passl

Haematological malignancy

RESEARCH PAPERS

69 **A simple, robust, validated and highly predictive index for the determination of risk-directed therapy in acute myeloid leukaemia derived from the MRC AML 10 trial**
Keith Wheatley, Alan K. Burnett, Anthony H. Goldstone, Richard G. Gray, Ian M. Hann, Christine J. Harrison, John K. H. Rees, Richard F. Stevens and Helen Walker

80 **Real-time RT-PCR for the detection and quantification of AML1/MTG8 fusion transcripts in t(8;21)-positive AML patients**
Jürgen Krauter, Mike Peter Wattjes, Stefan Nagel, Olaf Heidenreich, Utz Krug, Sabine Kafert, Donald Bunjes, Lothar Bergmann, Arnold Ganser and Gerhard Heil

86 **All-*trans* retinoic acid regulates adhesion mechanism and transmigration of the acute promyelocytic leukaemia cell line NB-4 under physiologic flow**
David C. Brown, Hisashi Tsuji and Richard S. Larson

99 **Fas-mediated lysis of chronic lymphocytic leukaemia cells: role of type I versus type II cytokines and autologous FasL-expressing T cells**
Jonathan F. Williams, Matthew J. Petrus, Jacob A. Wright, Anne Husebekk, Vicki Fellowes, Elizabeth J. Read, Ronald E. Gress and Daniel H. Fowler

106 **Molecular features of primary mediastinal B-cell lymphoma: involvement of $p16^{INK4A}$, p53 and c-myc**
Aldo Scarpa, Patrick S. Moore, Gildas Rigaud, Giorgio Inghirami, Marina Montresor, Marta Menegazzi, Giuseppe Todeschini and Fabio Menestrina

114 **V_H gene sequences from a novel tropical splenic lymphoma reveal a naive B cell as the cell of origin**
Delin Zhu, Andrew R. Thompsett, George Bedu-Addo, Freda K. Stevenson and Imelda Bates

121 **High-sensitive immunophenotyping and DNA ploidy studies for the investigation of minimal residual disease in multiple myeloma**
Julia Almeida, Alberto Orfao, Mauricio Ocqeteau, Gema Mateo, Mercedes Corral, M[a] Delores Caballero, Joan Blade, M[a] Jesus Moro, Jose Hernandez and Jesus F. San Miguel

132 **Serum interleukin-6 has no discriminatory role in paraproteinaemia nor a prognostic role in multiple myeloma**
C. G. Schaar, U. Kaiser, S. Snijder, F. Ong, J. Hermans, P. F. H. Franck and J. C. Kluin-Nelemans

139 **Platelet c-mpl expression is dysregulated in patients with essential thrombocythaemia but this is not of diagnostic value**
Claire N. Harrison, Rosemary E. Gale, Francesco Pezella, Anthony Mire-Sluis, Samuel J. Machin and David C. Linch

148 **The PNH phenotype cells that emerge in most patients after CAMPATH-1H therapy are present prior to treatment**
A. C. Rawstron, S. J. Rollinson, S. Richards, M. A. Short, A. English, G. J. Morgan, G. Hale and P. Hillmen

Transplantation

RESEARCH PAPERS

154 **Allogeneic bone marrow transplantation in aggressive non-Hodgkin's lymphoma (excluding Burkitt and lymphoblastic lymphoma): a series of 73 patients from the SFGM database**
N. Dhedin, S. Giraudier, P. Gaulard, H. Esperou, N. Ifrah, M. Michallet, N. Milpied, B. Rio, J. Y. Cahn, L. Molina, J. L. Laporte, F. Guilhot and M. Keuntz

162 **Competitive repopulation of retrovirally transduced haemopoietic stem cells**
Shenwei Qin, Maureen Ward, Harry Raftopoulos, Hongyu Tang, Brigid Bradley, Charles Hesdorffer and Arthur Bank

169 **Selective depletion of major and minor histocompatibility antigen T cells: towards prevention of acute graft-versus-host disease**
Astrid M. C. van Dijk, Floortje L. Kessler, Simone A. E. Stadhouders-Keet, Leo F. Verdonck, Gijsbert C. de Gast and Henny G. Otten

176 **Distinct patterns of apoptosis in association with modulation of CD44 induced by thrombopoietin and granulocyte-colony stimulating factor during *ex vivo* expansion of human cord blood CD34$^+$ cells**
Ju-Young Seoh, So-Youn Woo, Seock-Ah Im, Young-Ju Kim, Hae-Young Park, Seok Lee, Mi-Ae Lee, Eun-Sun Yoo, Jung-Won Huh, Kyung-Ha Ryu, Soon-Nam Lee, Wha-Soon Chung and Chu-Myong Seong

Transfusion medicine

RESEARCH PAPER

186 **Evidence that anti-HBc but not HBV DNA testing may prevent some HBV transmission by transfusion**
Jean-Pierre Allain, Patricia E. Hewitt, Richard S. Tedder and Lorna M. Williamson

Haemostasis and thrombosis

RESEARCH PAPER

196 **Identification of a factor VIII peptide, residues 2315–2330, which neutralizes human factor VIII C2 inhibitor alloantibodies: requirement of Cys^{2326} and Glu^{2327} for maximum effect**
Keiji Nogami, Midori Shima, Hiroaki Nakai, Ichiro Tanaka, Hiroshi Suzuki, Shogo Morichika, Masaru Shibata, Evgueni L. Saenko, Dorothea Scandella, John C. Giddings and Akira Yoshioka

SHORT REPORTS

204 **Bleeding and thrombosis in 55 patients with inherited afibrinogenaemia**
M. Lak, M. Keihani, F. Elahi, F. Peyvandi and P. M. Mannucci

207 **Racial background is a determinant of average warfarin dose required to maintain the INR between 2·0 and 3·0**
Andrew Blann, Jasvinder Hewitt, Fouad Siddiqui and David Bareford

210 **Factor V Leiden and the common haemochromatosis mutation HFE C282Y: is there an association in familial venous thromboembolic disease?**
Rhona M. MacLean, Graham P. Feeney, Steven J. Bowley, Derrick J. Bowen, Mark Worwood and Peter W. Collins

Correspondence

213 **Born to clot: the European burden**
L. J. Newton, A. Krishnan and L. A. Parapia

213 **Spontaneous phenotypic and molecular blood remission in a case of chronic lymphocytic leukaemia**
Marc Bernard, Bernard Drenou, Céline Pangault, Charles Dauriac, Renée Fauchet, Pierre-Yves LePrise and Thierry Lamy

214 **Unusual presentation of primary autoimmune neutropenia**
P. T. Murphy and M. C. Casey

216 **Book Reviews**

217 **Announcements**

218 **Corrigenda**

VOL. 107 NO. 2 NOVEMBER 1999

Images in Haematology

219 **The peripheral blood in metastatic melanoma**
D. Swirsky and J. Luckit

Reviews

220 **The continuing challenge of treatment for non-Hodgkin's lymphoma in children**
C. R. Pinkerton

235 **Can antimicrobial central venous catheters prevent associated infection?**
T. S. J. Elliott

Historical review

242 **Inherited bone marrow failure: the men behind the empty space**
Owen P. Smith and John Cox

Haemopoiesis

RESEARCH PAPERS

247 **Spatial and temporal mapping of c-*kit* and its ligand, stem cell factor expression during human embryonic haemopoiesis**
Magali Teyssier-Le Discorde, Stephane Prost, Emiline Nandrot and Marek Kirszenbaum

254 **WASP is involved in proliferation and differentation of human haemopoietic progenitors *in vitro***
Michiko Kajiwara, Shigeaki Nonoyama, Mitsuoki Eguchi, Tomohiro Morio, Kohsuke Imai, Hiroji Okawa, Masafumi Kaneko, Masahiro Sako, Shouichi Ohga, Miho Maeda, Shigeyoshi Hibi, Hisako Hashimito, Atsushi Shibuya, Hans D. Ochs, Tatsutoshi Nakahata and Jun-Ichi Yata

263 **Time-course expression of polypeptides carrying blood group antigens during human erythroid differentiation**
Viviane Bony, Pierre Gane, Pascal Bailly and Jean-Pierre Cartron

275 **Propagation and senescence of human marrow stromal cells in culture: a simple colony-forming assay identifies samples with the greatest potential to propagate and differentiate**
Carla M. DiGirolamo, David Stokes, David Colter, Donald G. Phinney, Reiner Class and Darwin J. Prockop

Erythrocytes and leucocytes

RESEARCH PAPERS

282 **Metabolism and functional effects of sphingolipids in blood cells**
Libo Yang, Yutaka Yatomi, Yoshie Miura, Kaneo Satoh and Yukio Ozaki

294 **Retinoic acid stimulates plasminogen activator inhibitor 2 production by blood mononuclear cells and inhibits urokinase-induced extracellular proteolysis**
P. Montemurro, G. Barbuti, M. Conese, S. Gabriele, M. Petio, M. Colucci and N. Semeraro

SHORT REPORT

300 **Phosphatidylserine-related adhesion of human erythrocytes to vascular endothelium**
Christèle Closse, Jeanne Dachary-Prigent and Michel R. Boisseau

Platelets and haemostasis

RESEARCH PAPERS

303 **Further characterization of antibody and antigen in heparin-induced thrombocytopenia**
Peter M. Newman and Beng H. Chong

310 **Hereditary thrombocythaemia in a Japanese family is caused by a novel point mutation in the thrombopoietin gene**
Nico Ghilardi, Adrian Wiestner, Masahiro Kikuchi, Akimichi Ohsaka and Radek C. Skoda

317 **A novel missense mutation in the human plasmin inhibitor (alpha$_2$-antiplasmin) gene associated with a bleeding tendency**
Bent Lind and Sixtus Thorsen

323 **Phospholipid binding of factor VIII in different therapeutic concentrates**
S. Raut, L. Weller and T. W. Barrowcliffe

Bone marrow hypoplasia

RESEARCH PAPERS

330 **Rabbit antithymocyte globulin (r-ATG) plus cyclosporine and granulocyte colony stimulating factor is an effective treatment for aplastic anaemia patients unresponsive to a first course of intensive immunosuppressive therapy**
E. Di Bona, F. Rodeghiero, B. Bruno, A. Gabbas, P. Foa, A. Locasciulli, C. Rosanelli, L. Camba, P. Saracco, A. Lippi, A. P. Iori, F. Porta, V. De Rossi, B. Comotti, P. Iacopino, C. Dufour and A. Bacigalupo

335 **Unexplained aplastic anaemia, immunodeficiency and cerebellar hypoplasia (Hoyeraal-Hreidarsson syndrome) due to mutations in the dyskeratosis gene, *DKC1***
S. W. Knight, N. S. Heiss, T. J. Vulliamy, C. M. Aalfs, C. McMahon, P. Richmond, A. Jones, R. C. M. Hennekam, A. Poustka, P. J. Mason and I. Dokal

Haematological malignancy

RESEARCH PAPERS

340 **Characterization of 12p molecular events outside ETV6 in complex karyotypes of acute myeloid malignancies**
Roberta La Starza, Mario Stella, Nicoletta Testoni, Eros Di Bona, Stefania Ciolli, Peter Marynen, Massimo Fabrizio Martelli, Franco Mandelli and Cristina Mecucci

347 **Surface CD14 positivity in B-cell chronic lymphocytic leukaemia is related to clinical outcome**
Vincenzo Callea, Fortunato Morabito, Bianca Maria Oliva, Caterina Stelitano, Domenico Levato, Angela Dattilo, Francesca Gangemi, Antonella Iorfida, Pasquale Iacopino, Francesco Nobile, Stefano Molica and Maura Brugiatelli

353 **Hepatitis B and C virus infection in Romanian non-Hodgkin's lymphoma patients**
Andrei Cucuianu, Mariana Patiu, Milena Duma, Carmen Basarab, Olga Soritau, Anca Bojan, Anca Vasilache, Mihaela Mates and Ljubomir Petrov

357 **Identification of patient-specific peptides for detection of M-proteins and myeloma cells**
Pal B. Szecsi, Erik Riise, Lisbeth B. Roslund, Jan Engberg, Ingemar Turesson, Lone Buhl and Claus Schafer-Nielsen

365 **BCR-ABL influences the antileukaemic efficacy of alkylphosphocholines**
Spiro M. Konstantinov, Hansjörg Eibl and Martin R. Berger

375 **Plasma IL-8 and IL-6 levels can be used to define a group with low risk of septicaemia among cancer patients with fever and neutropenia**
Eveline S. J. M. de Bont, Edo Vellenga, Joost C. J. M. Swaanenburg, Vaclav Fidler, Petra J. Visser-van Brummen and Willem A. Kamps

SHORT REPORTS

381 **Clonal selection of $CD56^+$t(8;21) AML blasts: further suggestion of the adverse clinical significance of this biological marker?**
Jasmine T. Daniels, Brad J. Davis, Lisa Houde-McGrail and John C. Byrd

384 ***Bcl10* in chronic lymphocytic leukaemia and T-cell prolymphocytic leukaemia**
M. R. Yuille, J. G. Stone, P. S. Bradshaw and R. S. Houlston

386 **Acute tumour lysis syndrome: a case in AL amyloidosis**
Marwan S. Akasheh, Chi P. Chang and David H. Vesole

388 **Tumour necrosis factor polymorphisms and susceptibility to follicular lymphoma**
Jude Fitzgibbon, Demetrios Grenzelias, Janet Matthews, T. Andrew Lister and Rajnish K. Gupta

392 **Mcl-1 and Bcl-x_L are co-regulated by IL-6 in human myeloma cells**
Denis Puthier, Sophie Derenne, Sophie Barillé, Phillipe Moreau, Jean-Luc Harousseau, Régis Bataille and Martine Amiot

Transplantation

RESEARCH PAPERS

396 **Molecular remission of chronic myeloid leukaemia following a non-myeloablative allogeneic peripheral blood stem cell transplant: *in vivo* and *in vitro* evidence for a graft-versus-leukaemia effect**
R. Childs, D. Epperson, E. Bahceci, E. Clave and J. Barrett

401 **Enhanced retroviral gene transfer into CML and normal bone marrow, and CML and mobilized peripheral blood $CD34^+$ cells using the recombinant fibronectin fragment CH-296**
Elaine Garrett, Marina I. Garin, Angela R-M. Miller, John M. Goldman, Junia V. Melo and Jane F. Apperley

409 **Factors affecting the outcome of allogeneic bone marrow transplantation for adult patients with refractory or relapsed acute leukaemia**
Andrew P. Grigg, Jeff Szer, Jennifer Beresford, Anthony Dodds, Ken Bradstock, Simon Durrant, Anthony P. Schwarer, Timothy Hughes, Richard Herrmann, John Gibson, Chris Arthur and Jane Matthews

419 **Selection and transplantation of autologous CD34$^+$ B-lineage negative cells in advanced-phase multiple myeloma patients: a pilot study**
Roberto M. Lemoli, Giovanni Martinelli, Attillio Olivieri, Maria Rosa Motta, Simonetta Rizzi, Carolina Terragna, Giuliana Leopardi, Monica Benni, Sonia Ronconi, Isabella Cantori, Damiano Rondelli, Serena Mangianti, Pietro Leoni, Mauro Montanari, Michele Cavo and Sante Tura

429 **Comparative serial quantitative measurements of chimaerism following unmanipulated allogeneic transplantation of peripheral blood stem cells and bone marrow**
G. Miflin, C. J. Stainer, G. I. Carter, J. L. Byrne, A. P. Haynes and N. H. Russell

441 **Cord blood progenitor cells have greater transendothelial migratory activity and increased responses to SDF-1 and MIP-3β compared with mobilized adult progenitor cells**
K. Yong, A. Fahey, L. Reeve, C. Nicholls, N. S. B. Thomas, A. Pizzey, S. J. Ings, M. J. Watts and D. C. Linch

450 **Intracellular cytokine production and cytokine receptor interaction of cord mononuclear cells: relevance to cord blood transplantation**
P. Han and G. Hodge

General haematology

SHORT REPORT

458 **A bone marrow biopsy technique suitable for use in neonates**
Martha C. Sola, Lisa M. Rimsza and Robert D. Christensen

Correspondence

461 **Simultaneous occurrence of follicular lymphoma in two monozygotic twins**
Fernando Marco, Raquel Manjón, Carlos Richard, Francisco Mazorra, Ana García-Valtuille, M. Dolores Delgardo, M. Luisa Loyo, M. Angeles Cuadrado and Alberto Zubizarreta

462 **Serum M-CSF levels in Kawasaki disease**
Shinji Oana, Masaru Terai and Yoichi Kohno

463 **Elevated serum LDH in patients with non-Hodgkin's lymphoma: not always an ominous sign**
David P. Steensma and Thomas E. Witzig

464 **The frequency of the haemochromatosis C282Y mutation in the ethnic Hungarian and Romany populations of eastern Hungary**
Szilvia Szakony, István Balogh and László Muszbek

466 **Announcements**

VOL. 107 NO. 3 DECEMBER–I 1999

Images in Haematology

467 **Invasive aspergillosis of the heart**
Hidekazu Kayano, Takanori Hirose, Hideki Orikasa and Shojiroh Morinaga

Reviews

468 **Factor XIII deficiency**
Rashida Anwar and Krzysztof J. A. Miloszewski

485 **The pathology, diagnosis, and treatment of hepatic veno-occlusive disease: current status and novel approaches**
Paul Richardson and Eva Guinan

Haemopoiesis

RESEARCH PAPER

494 **CD82 (KAI1), a member of the tetraspan family, is expressed on early haemopoietic progenitor cells and up-regulated in distinct human leukaemias**
Andreas Burchert, Michael Notter, Hans Dietrich Menssen, Stefan Schwartz, Wolfgang Knauf, Andreas Neubauer and Eckhard Thiel

Bone marrow hypoplasia

RESEARCH PAPER

505 **Coexistence of normal and clonal haemopoiesis in aplastic anaemia patients treated with immunosuppressive therapy**
G. Piaggio, M. Podestà, A. Pitto, M. Sessarego, O. Figari, G. Fugazza, F. Benvenuto, B. Bruno, M. T. van Lint, M. Truini, F. Frassoni and A. Bacigalupo

Red blood cells and iron

RESEARCH PAPERS

512 **Neutrophil hypersegmentation in iron deficiency anaemia: a case–control study**
D. A. Westerman, D. Evans and J. Metz

516 **The erythrocyte effects of haemoglobin O_{ARAB}**
Ronald L. Nagel, Rajagopal Krishnamoorthy, Slaheddine Fattoum, Jacques Elion, Nathalie Genard, Jose Romero and Mary E. Fabry

SHORT REPORT

522 **Determinants of iron status and bilirubin levels in congenital dyserythropoietic anaemia type I**
S. N. Wickramasinghe, S. L. Thein, S. Srichairatanakool and J. B. Porter

Platelets, haemostasis and thrombosis

RESEARCH PAPERS

526 **Accessibility of abciximab to megakaryocytes and endothelial cells in the bone marrow compartment: studies on a patient receiving antithrombotic therapy**
Christel Poujol, Catherine Durrieu-Jais, Benoit Larrue, Alan T. Nurden and Paquita Nurden

532 **p38 MAPK is activated but not necessary in porcine von Willebrand factor-dependent platelet activation**
Seng Song, John Freedman, Meera Mody and Alan H. Lazarus

539 **Cys97→Tyr mutation in the glycoprotein IX gene associated with Bernard-Soulier syndrome**
Shinji Kunishima, Yoshiaki Tomiyama, Shigenori Honda, Yoshiyuki Kurata, Tadashi Kamiya, Kazuo Ozawa and Hidehiko Saito

546 **Characterization of platelet glycoproteins and platelet/endothelial cell antibodies in patients with thrombotic thrombocytopenic purpura**
J. F. Wright, H. Wang, A. Hornstein, M. Hogarth, M. Mody, M. B. Garvey, V. Blanchette, G. Rock and J. Freedman

556 **Increased bleeding associated with protease inhibitor therapy in HIV-positive patients with bleeding disorders**
Jonathan T. Wilde, Christine A. Lee, Peter Collins, Paul L. F. Giangrande, Mark Winter and Caroline R. Shiach

SHORT REPORTS

560 **Grandpaternal mosaicism in a family with isolated haemophilia A**
Graeme J. Casey, Susan E. Rodgers, Jennifer R. Hall, Zbigniew Rudzki and John V. Lloyd

563 **Allelic distribution of the glycoprotein Ia (α2-integrin) C807T/G873A dimorphisms among Caucasian venous thrombosis patients and six racial groups**
David M. Dinauer, Kenneth D. Friedman and Martin J. Hessner

566 **Specific analysis of the intron 22 *Xba*I polymorphism of the human factor VIII gene using long-distance PCR**
Carlos D. De Brasi, Derrick J. Bowen, Peter W. Collins and Irene B. Larripa

569 **The methylenetetrahydrofolate reductase gene C677T polymorphism in patients with homozygous sickle cell disease and stroke**
A. M. Cumming, A. Olujohungbe, S. Kenney, H. Singh, C. R. M. Hay and G. R. Serjeant

Haematological maglignancy

RESEARCH PAPERS

572 **Expression of AC133 and CD117 on candidate normal stem cell populations in childhood B-cell precursor acute lymphoblastic leukaemia**
G. Baersch, M. Baumann, J. Ritter, H. Jürgens and J. Vormoor

581 **Chronic myelogenous leukaemia with $p185^{BCR/ABL}$ expression: characteristics and clinical significance**
Farhad Ravandi, Jorge Cortes, Maher Albitar, Ralph Arlinghaus, Jie Qiang Guo, Moshe Talpaz and Hagop M. Kantarjian

587 **Monitoring chronic myeloid leukaemia therapy by real-time quantitative PCR in blood is a reliable alternative to bone marrow cytogenetics**
S. Branford, T. P. Hughes and Z. Rudzki

600 **Molecular heterogeneity of the *NUP98/HOXA9* fusion transcript in myelodysplastic syndromes associated with t(7;11)(p15;p15)**
Yoshiaki Hatano, Ikuo Miura, Takuro Nakamura, Yukari Yamazaki, Naoto Takahashi and Akira B. Miura

605 **Increased serum levels of vascular endothelial growth factor predict risk of progression in early B-cell chronic lymphocytic leukaemia**
Stefano Molica, Gaetano Vitelli, Domenico Levato, Giuseppe Maria Gandolfo and Vincenzo Liso

611 **Antisene-mediated suppression of Bcl-2 highlights its pivotal role in failed apoptosis in B-cell chronic lymphocytic leukaemia**
Chris Pepper, Alun Thomas, Terry Hoy, Finbarr Cotter and Paul Bentley

616 **V_H gene usage by family members affected with chronic lymphocytic leukaemia**
Otto Pritsch, Xavier Troussard, Christian Magnac, Francesca R. Mauro, Frederic Davi, Beatrice Payelle-Brogard, Gerard Dumas, Marc Pulik, Françoise Clerget, Franco Mandelli, Nicholas Chiorazzi, Harry W. Schroeder Jr, Michel Leporrier and Guillaume Dighiero

625 **The genetic variability of the V_H genes in follicular lymphoma: the impact of the hypermutation mechanism**
Sofie M. Noppe, Carlo Heirman, Marleen H. C. Bakkus, Jan Brissinck, Rik Schots and Kris Thielemans

641 **X-chromosome inactivation analysis of isolated Reed-Sternberg cells in nodular sclerosing Hodgkin's disease**
Hsiao-Weng Chang, Siew-Meng Chong, Suat-Cheng Peh and Szu-Hee Lee

648 **Generation of anti-idiotype immune responses following vaccination with idiotype-protein pulsed dendritic cells in myeloma**
G. Cull, L. Durrant, C. Stainer, A. Haynes and N. Russell

656 **Complete remission rate and outcome after intensive treatment of 177 patients under 75 years of age with IgG myeloma defining a circumscribed disease entity with a new staging system**
Bhawna Sirohi, Ray Powles, Jayesh Mehta, Noopur Raje, Samar Kulkarni, Veshana Ramiah, Radovan Saso, Clive Horton, Niyata Bhagwati, Seema Singhal and Jennifer Treleaven

SHORT REPORTS

667 **Low frequency of the TEL/AML1 fusion gene in acute lymphoblastic leukaemia in Spain**
R. García-Sanz, I. Alaejos, A. Orfão, A. Rasillo, M. C. Chillón, M. D. Tabernero, M. V. Mateos, R. López-Pérez, D. González, A. Balanzategui, M. González and J. F. San Miguel

670 **Multiple autoimmune haemopoietic disorders and insidious clonal proliferation of large granular lymphocytes**
Koichi Akashi, Tsunefumi Shibuya, Shuichi Taniguchi, Shin Hayashi, Hiromi Iwasaki, Takanori Teshima, Yasushi Takamatsu, Hisashi Gondo, Takashi Okamura, Mine Harada and Yoshiyuki Niho

674 **NG2 expression in MLL rearranged acute myeloid leukaemia is restricted to monoblastic cases**
L. Mauvieux, F. Delabesse, P. Bourquelot, I. Radford-Weiss, A.-L. Bennaceur, G. Flandrin, F. Valensi and E. A. Macintyre

Correspondence

677 **Successful use of recombinant FVIIa (Novoseven®) in the management of intractable post-surgical intra-abdominal haemorrhage**
B. White, J. McHale, N. Ravi, J. Reynolds, R. Stephens, J. Moriarty and O. P. Smith

VOL. 107 NO. 4 DECEMBER–II 1999

Images in Haematology

679 **Malignant histiocytosis**
Richard D. Brunning

Annotation

680 **Implementing clinical governance in the United Kingdom: the role of a regional haematology group**
M. J. Galloway, P. R. A. Taylor and S. J. Proctor

Reviews

685 **High-dose therapy for Hodgkin's disease**
David C. Linch and Anthony H. Goldstone

691 **Essential thrombocythaemia in children**
Yigal Dror and Victor S. Blanchette

Erythrocytes

RESEARCH PAPER

699 **Molecular, haematological and clinical studies of the −101 C→T substitution of the β-globin gene promoter in 25 β-thalassaemia intermedia patients and 45 heterozygotes**
E. Maragoudaki, E. Kanavakis, J. Traeger-Synindos, C. Vrettou, M. Tzetis, A. Metaxotou-Mavrommati and C. Kattamis

Leucocytes

RESEARCH PAPER

707 **Extracorporeal photopheresis induces apoptosis in the lymphocytes of cutaneous T-cell lymphoma and graft-versus-host disease patients**
J. Bladon and P. C. Taylor

SHORT REPORT

712 **Flow cytometric detection of CD10 (cALLA) on peripheral blood B lymphocytes of neonates**
Katherine A. Brady, Susan K. Atwater and Clifford A. Lowell

Platelets, haemostasis and thrombosis

RESEARCH PAPERS

716 **Intravenous immunoglobulin for adults with autoimmune thrombocytopenic purpura: results of a randomized trial comparing 0·5 and 1 g/kg b.w.**
Bertrand Godeau, Marie Thérèse Caulier, Laurent Decuypere, Christian Rose, Annette Schaeffer and Philippe Bierling

720 **Intracellular trafficking of the $\alpha_{IIb}\beta_3$ receptor antagonist, abdiximab, in normal and Glanzmann's disease megakaryocytes**
Jean-Marc Massé, Katy Perlemuter, Najet Debili, Rémi letestu, Alain Castaigne and Elisabeth M. Cramer

731 **Identification and characterization of zebrafish thrombocytes**
P. Jagadeeswaran, J. P. Sheehan, F. E. Craig and D. Troyer

739 **A chronic hypercoagulable state in patients with β-thalassaemia major is already present in childhood**
A. Eldor, R. Durst, E. Hy-Am, A. Goldfarb, S. Gillis, E. A. Rachmilewitz, A. Abramov, J. Maclouf, Y. C. Godefray, E. de Raucourt and M. C. Guillin

747 **Leukaemia inhibitor factor enhances tissue factor expression in human monocyte-derived macrophages: a gp130-mediated mechanism**
Simcha R. Meisel, Ilan Shimon, Thomas S. Edgington, Shlomo Melmed, Bojan Cercek and Prediman K. Shah

756 **Partial depletion of tissue factor pathway inhibitor during subcutaneous administration of unfractionated heparin but not with two low molecular weight heparins**
Bjørn Bendz, John-Bjarne Hansen, Trine O. Andersen, Per Østergaard and Per Morten Sandset

763 **Heterozygus factor XI deficiency associated with three novel mutations**
Michael Mitchell, Jacky Cutler, Simon Thompson, Gary Moore, Elane Jenkins ap Rees, Mark Smith, Geoffrey Savidge and Anwar Alhaq

766 **Creation of a novel donor splice site in intron 1 of the factor VIII gene leads to activation of a 191 bp cryptic exon in two haemophilia A patients**
Richard D. Bagnall, Naushin H. Waseem, Peter M. Green, Brian Colvin, Christine Lee and Francesco Giannelli

SHORT REPORTS

772 **A complete deficiency of coagulation factor XIII A-subunit due to a novel compound heterozygote of Ser 413 Leu missense and an nt 389 (ins G) frameshift mutation**
Toshiyuki Niiya, Haruhiko Osawa, Shiro Bando, Yoshiko Oto, Kiriko Tokuda, Namiko Takeda, Maki Sumioki, Mitsuharu Murase, Kaichi Kida and Hideichi Makino

776 **Three months supplementation of hyperhomocysteinaemia patients with folic acid and vitamin B6 improves biological markers of endothelial dysfunction**
Joël Constans, Andrew D. Blann, François Resplandy, François Parrot, Martine Renard, Martine Seigneur, Viviane Guérin, Michel Boisseau and Claude Conri

Haemopoiesis

RESEARCH PAPER

779 **A time kinetic study of the effect of aminobisphosphonate on murine haemopoiesis**
Masanori Nakamura, Hideki Yagi, Yasuo Endo, Tadashi Ishi and Tsunetoshi Itoh

Bone marrow hypoplasia

RESEARCH PAPERS

791 **Cytotoxicity against lymphoblastoid cells mediated by a T-cell clone from an aplastic anaemia patient: role of CD59 on target cells**
Akiyoshi Takami, Weihua Zeng, Hongbo Wang, Tamotsu Matsuda and Shinji Nakao

797 **Reduced TGF-β1 in patients with aplastic anaemia *in vivo* and *in vitro***
S. Rizzo, S. B. Killick, S. Patel, S. E. Ball, M. Wadhwa, P. Dilger, E. C. Gordon-Smith and F. M. Gibson

Transfusion medicine

RESEARCH PAPER

804 **Distribution of cell-associated prion protein in normal adult blood determined by flow cytometry**
G. Robin Barclay, James Hope, Christopher R. Birkett and Marc L. Turner

SHORT REPORT

815 **Variable inhibition of placental IgG transfer *in vitro* with commercial IVgG preparations**
S. J. Urbaniak, J. I. Duncan, S. S. Armstrong-Fisher, D. R. Abramovich and K. R. Page

Haematological malignancy

RESEARCH PAPERS

818 **Circulating clonal cells in multiple myeloma do not express CD34 mRNA, as measured by single-cell and real-time RT-PCR assays**
Thomas Rasmussen, Linda Jensen, Lone Honoré, Heidi Andersen and Hans Erik Johnsen

825 **Characterization of VLA-4-dependent myeloma cell adhesion to fibronectin and VCAM-1**
Francisco Sanz-Ridríguez, Natividad Ruiz-Velasco, Dora Pascual-Salcedo and Joaquin Teixidó

835 **pH-dependent fibrillogenesis of a V_κIII Bence Jones protein**
Agueda Rostagno, Ruben Vidal, Batia Kaplan, Joseph Chuba, Ashok Kumar, James I. Elliott, Blas Frangione, Gloria Gallo and Jorge Ghiso

844 **Phenotypic and functional characteristics of monocyte-derived dendritic cells from patients with myelodysplastic syndromes**
Gian Matteo Rigolin, Julie Howard, Andrea Buggins, Claire Sneddon, Gianluigi Castoldi, William J. R. Hirst and Grulam J. Mufti

851 **Discrepant expression of membraine and soluble isoforms of Fas (CD95/APO-1) in adult T-cell leukaemia: soluble Fas isoform is an independent risk factor for prognosis**
Shimeru Kamihira, Yasuaki Yamada, Masao Tomonaga, Kazuyuki Sugahara and Kazuto Tsuruda

861 **Pgp-positive leukaemic cells have increased mtDNA but no increased rate of proliferation**
Li Jia, Kan-Zhi Liu, Adrian C. Newland, Henry H. Mantsch and Stephen M. Kelsey

870 **Immune complexes inhibit apoptosis of chronic lymphocytic leukaemia B cells**
Romina Gamberale, Jorge R. Geffner, Analía Trevani, Alejandra Cherñavsky, Mariani Scolnik, Guillermo Arrosagaray, Marcela Sarmiento and Mirta Giordano

877 **The immunosuppression and potential for EBV reactivation of fludarabine combined with cyclophosphamide and dexamethasone in patients with lymphoproliferative disorders**
Mario Lazzarino, Ester Orlandi, Fausto Baldanti, Milena Furione, Guido Pagnucco, Cesare Astori, Luca Arcaini, Alessandra Viglio, Marco Paulli, Giuseppe Gerna and Carlo Bernasconi

883 **Familial clustering of Langerhans cell histiocytosis**
Maurizio Aricò, Kim Nichols, James A. Whitlock, Robert Arceci, Riccardo Haupt, Uwe Mittler, Thomas Kühne, Alessandra Lombardi, Eiichi Ishii, R. Maarten Egeler and Cesare Danesino

SHORT REPORTS

889 **Clinical significance of urinary albumin excretion in patients with non-Hodgkin's lymphoma**
Lars Møller Pedersen and Peter Grundtvig Sørensen

892 **Osteitis fibrosa cystica generalizata with adult T-cell leukaemia: a case report**
Tetsuo Yamaguchi, Toru Hirano, Kenji Kumagai, Toshiyuki Tsurumoto, Hiroyuki Shindo, Ryuzo Majima and Nobuyuki Arima

Transplantation

RESEARCH PAPER

895 **Bone marrow cell trafficking following intravenous administration**
Jisong Cui, Richard L. Wahl, Tingliang Shen, Susan J. Fisher, Elizabeth Recker, David Ginsburg and Michael W. Long

Correspondence

903 **The geographic pattern of β-thalassaemia mutations in the Portuguese population**
Paula Faustino, Paula Pacheco, Pedro Loureiro, Paulo J. Nogueira and João Lavinha

905 **Corrigenda**

906 **Author and Keyword Indexes to Volume 107**